



**Supplemental Figure 1.** Amplification of *FIG1* from wt *F. graminearum* genomic DNA (gDNA), wt cDNA,  $\Delta f1$  cDNA, and  $\Delta f2$  cDNA templates. **Top: *FIG1*.** The ~438bp *FIG1* amplicon (arrowhead) is present only in wt cDNA. The ~600 bp band, visible in all samples, is a non-specific amplicon. L = NEB 1 kb DNA Ladder. **Bottom: *EF1A*.** Numbers at right indicate DNA size (kbp). L = NEB 100 bp DNA Ladder.

Supplemental TABLE 1. Primers used in this study	
Name	Sequence (5'-3')
<b>For replacement of the <i>F. graminearum</i> <i>FIG1</i> locus</b>	
Fig1-L5	CGACCTGACTTGACTGACTGACTG
Fig1-L3-Hyg	GTAGCAACCAGGCGTGGTAGATGTGGTCGACTTTGTTCTCC
Fig1-R5-Hyg	CTTTTACTTTCACCAGCGTTGGCTAACCAGATCTCTCAGGTTTTGTACC
Fig1-R3	ACATGAGATAGGGGAACACAATCATGTCC
Fig1-HygF	GACCACATCTACCACGCCTGGTTGCTACGCCTGAATAAGTG
Fig1-HygR	GAGATCTGGTTAGCCAACGCTGGTGAAAGTAAAAGATGCTGAAGATC
3' 1/2 HygF	AGTACTTCTACACAGCCATCGGTCCAGACG
5' 1/2 HygR	CTGCTGCTTGGTGCACGATAACTTGGTGC
<b>For <i>F. graminearum</i> RT-PCR</b>	
Fig1 RT-PCR-F	GTCCAGGTCGGATGGTATCGTTTTGTAC
Fig1 RT-PCR-R	GGCGAAGATGATGGCAATAATGATGAGATAG
EF1A-F	AAAGACCCTCCTTGAGGCCATTGA
EF1A-R	ACTTCAGTGGTGACGTTGGAAGGA
<b>For complementation of <i>F. graminearum</i> <math>\Delta</math> <i>ig1</i> mutants</b>	
Fig1-compF	TAGAAGAGCGCTACGTAAGATCGTAGATC
Fig1-compR	CGTTATTCATGAACCAGTACACGGAGATG
<b>For probe generation</b>	
Cch1 probeF	CTCAATCTCCTGCGAAGTGGAATGAG
Cch1 probeR	GCAGACAAGGGACTAATAATCGCCAAC
Mid1 probeF	ACATCGCCTCACTTTGTGATCTACAGTG
Mid1 probeR	GCTTAGTACGGCTTCGATCTAGCG
<b>For confirmation of <i>N. crassa</i> <i>ig1</i> and <i>mat A</i> locus presence or absence</b>	
Nc Fig1-F	GTTGGTTTCTTCGGCATCTGCGTTAATC
Nc Fig1-R	CGATGATCAACAGCGTGAAGCTGAAC
Nc MAT-A2 F	TGCTATGCTCAACGAGAACGAAGTATCG
Nc MAT-A2 R	ACTTCTGAGGACCGACTCGGTAAC TG

Supplemental TABLE 2. Fig1 amino acid sequences used in this study

Species	Length	Source <sup>a</sup>
<i>Ashbya gossypii</i>	260	<i>Ashbya</i> Genome Database, <a href="http://agd.vital-it.ch/index.html">http://agd.vital-it.ch/index.html</a>
<i>Aspergillus clavatus</i>	268	<i>Aspergillus</i> Comparative Database, <a href="http://www.broadinstitute.org/annotation/genome/aspergillus_group/MultiHome.html">http://www.broadinstitute.org/annotation/genome/aspergillus_group/MultiHome.html</a>
<i>Aspergillus flavus</i>	268	<i>Aspergillus</i> Comparative Database
<i>Aspergillus fumigatus</i>	245	<i>Aspergillus</i> Comparative Database
<i>Aspergillus nidulans</i>	268	<i>Aspergillus</i> Comparative Database
<i>Aspergillus oryzae</i>	268	<i>Aspergillus</i> Comparative Database
<i>Aspergillus terreus</i>	268	<i>Aspergillus</i> Comparative Database
<i>Candida albicans</i>		<i>Candida</i> Genome Database, <a href="http://www.candidagenome.org/">http://www.candidagenome.org/</a>
<i>Magnaporthe oryzae</i>	267	<i>Magnaporthe grisea</i> Database, <a href="http://www.broadinstitute.org/annotation/genome/magnaporthe_grisea/MultiHome.html">http://www.broadinstitute.org/annotation/genome/magnaporthe_grisea/MultiHome.html</a>
<i>Neosartorya fischeri</i>	268	<i>Aspergillus</i> Comparative Database
<i>Neurospora crassa</i>	266	<i>Neurospora crassa</i> Database, <a href="http://www.broadinstitute.org/annotation/genome/neurospora/MultiHome.html">http://www.broadinstitute.org/annotation/genome/neurospora/MultiHome.html</a>
<i>Penicillium chrysogenum</i>	268	Kyoto Encyclopedia of Genes and Genomes, <a href="http://www.kegg.jp/">http://www.kegg.jp/</a>
<i>Saccharomyces cerevisiae</i>	297	<i>Saccharomyces</i> Genome Database, <a href="http://www.yeastgenome.org/">http://www.yeastgenome.org/</a>
<i>Saccharomyces kluyveri</i>	291	Génolevures, <a href="http://www.genolevures.org">http://www.genolevures.org</a>
<i>Sclerotinia sclerotiorum</i>	243	<i>Sclerotinia sclerotiorum</i> Database, <a href="http://www.broadinstitute.org/annotation/genome/sclerotinia_sclerotiorum/MultiHome.html">http://www.broadinstitute.org/annotation/genome/sclerotinia_sclerotiorum/MultiHome.html</a>
<i>Sordaria macrospora</i>	266	The <i>Sordaria macrospora</i> genome homepage at the Ruhr-University Bochum, <a href="http://c4-1-8.serverhosting.rub.de/public/downloads.html">http://c4-1-8.serverhosting.rub.de/public/downloads.html</a>
<sup>a</sup> all databases accessed July, 2011		

SUPPLEMENTARY TABLE 3. Expression of HACS and LACS genes across vegetative growth and sexual development in *F. graminearum*

Gene designation	Gene name	RPKM values <sup>a</sup>					
		vegetative growth	24h	48h	72h	96h	144h
FGSG_07418	<i>MIDI</i>	22.5197	25.4393	30.7259	17.7237	17.6905	15.5053
FGSG_01364	<i>CCHI</i>	7.85887	4.59464	5.59397	12.0789	14.7028	22.8262
FGSG_06302	<i>FIG1</i>	125.588	26.691	23.3506	45.3652	58.5581	71.2267

<sup>a</sup>24h, 48h, 72h, 96h, 144h represent stages of perithecius development following induction of the sexual cycle, as described by Hallen et al (35). 24h: ascogonia; 48: new wall just forming; 72h paraphyses fill the centrum; 96h: asci are immature; 144h: mature asci with spores shooting.